

## Response to peer review

### Comments

*#1: please discuss if advancing an IVUS catheter will straighten a kink in a vessel; is it possible that a hemodynamically significant kink is straightened by the IVUS catheter = false negative result?*

A haemodynamically significant stenosis is identified on a pressure wire study, where a pressure gradient is identified across a lesion. Haemodynamics are not assessable at IVUS, which is able to provide anatomical information. It is possible for an IVUS catheter to marginally under- or overestimate the precise diameter of the vessel at a given point within an angulated artery, with foreshortening or elongation of the visualised artery of a few millimetres at most. Also the passage of an IVUS catheter would not permanently straighten a kinked vessel, as it would recoil back to its resting position following removal of the probe.

*#2: The authors concluded no atherosclerosis was present at the artefactual angulated lesion. However, according to the IVUS video, there was some atherosclerotic plaque at the just proximal of LAD. In addition, during IVUS video, the recording of image was jumped at such lesion. and the observation may not be sufficient. The authors should comment on this.*

We agree that there is some atherosclerotic plaque, yet this is neither seen to cause an impediment to flow at pressure wire, nor seen to cause sufficient luminal stenosis to be of prognostic significance. We recognise that pressure wire negative coronary artery lesions, and mild coronary luminal stenosis, bear no significant increased cardiovascular risk, so we maintain that our prior statement that “intravascular ultrasound demonstrated a normal calibre vessel throughout, with no significant atheroma”, is correct. We concur that the recording provided included a “jump” in the video, that occurred inadvertently during the video reformatting process, and we have provided a revised video.

*#3: Did chest discomfort of the present patient occur during exercise or at rest? In addition, the authors had better provide the vital sign, especially about blood pressure, of the patient.*

The above points have been clarified in the manuscript text.